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GENERAL®

ELECTRICALLY INSULATED 14mm PROBE

USER'S MANUAL

NOTE: ETL SAFETY RATING ONLY APPLIES TO THE DCS400 SERIES SYSTEMS.

PE14

Please read this manual carefully and thoroughly before using this product.

INTRODUCTION

Thank you for purchasing a PE14 Electrically Insulated Probe for your Seeker™ 400 Series (DCS400, DCS400-05 or DCS400-09) Wireless Recording Video Inspection System. Please read this user's manually thoroughly and carefully before using the product.

The PE14 is a unique, electrically insulated, far-focus camera-tipped probe that gives the DCS400 system it is attached to an ETL safety rating of CAT III 1000V, CAT IV 600V.

⚠ WARNING ⚠

Although the PE14 probe is also compatible with the handle of Seeker 300, 200 and 100 (DCS300, DCS200 and DCS100) systems, attaching it to those systems does NOT upgrade their safety ratings. General does not advise and bears no responsibility for use of the PE14 probe with any system other than the DCS400.

Working in concert with a DCS400, the PE14 makes it safe to inspect two kinds of environments:

1. Any area or enclosure where you would expect to find electrical wiring. Examples include junction and distribution boxes, circuit breaker panels, electrical cabinets, equipment chassis and enclosures, and motor control centers. Whether the wiring is exposed or hidden, it represents a potential hazard hazard to anyone operating a video camera scope with a conventional probe with a metal exterior.
2. Any area or enclosure where you would *not* expect to find electrical wiring, but exposed wiring nevertheless may be present. Examples include attics, crawl spaces, rafters, ducts and basements of houses—in short, any area that is too inaccessible, confined or dark to be visible to the naked eye.

Such areas may contain electrical hazards created by age (worn insulation, e.g.) or structural modifications.

The PE14 makes it possible to inspect electrically hazardous areas (as well as safe areas) using the capabilities and features of a Seeker 400 Series system. The probe has many applications in the automotive/boat/aircraft repair, plumbing, construction, restoration and HVAC/R industries.

KEY FEATURES

- Attachment to DCS400 Series video camera scope gives entire system an ETL safety rating of CAT III 1000V, CAT IV 600V
- Flexible-obedient design lets user bend probe into different shapes and hold them to facilitate inspection of different areas
- 14mm diameter enables use in close quarters
- Wide depth of field of 1 in. (25mm) to infinity for clarity at all distances
- Adjustable LED lights inside probe tip illuminate dark spaces
- Water, dust, oil and scratch-resistant to IP67 standard

SAFETY INSTRUCTIONS

⚠ WARNING

- DO NOT attach the PE14 to the handle of any video inspection system other than the DCS400, DCS400-05 or DCS400-09. Doing so does NOT upgrade the ETL safety rating of that unit. Doing so also voids the warranty of the PE14.
- If you have attached any of the three included probe tip accessories (the 45° mirror, the magnetic pickup, or the pickup hook), to the PE14, DO NOT use it to inspect any equipment or area known or suspected to contain "live" electrical wiring. Doing so could cause an explosive short-circuit that could cause serious equipment damage or personal injury.
- Before using the PE14 probe, carefully inspect it for any cuts, nicks or abrasions in its insulation. If you detect any flaws, discard the probe and purchase a new one. **It is extremely important to inspect the probe for flaws before each and every use.**

WHAT'S IN THE BOX

The PE14 comes in a box with a package of three probe tip accessories (a 45° mirror, a magnetic pickup, and a pickup hook) and this user's manual.

ATTACHING THE PROBE

To attach the PE14 probe to the handle (grip) of a DCS400 Series system, first roll the rubber insulation back from the connector end of the probe. Then line up the probe's alignment key with the flat on the coupling of the DCS400's probe connector (left photo below). Push the two ends together until they mate. To secure the connection, turn the collar of the probe connector (right photo below). Finally, roll the yellow insulation forward until it covers both joined metal connectors. Make sure to extend the insulation until it reaches the grip's plastic housing (bottom figure).

To detach the probe, reverse the process: After rolling back the insulation, turn the collar counterclockwise and pull the PE14 straight out from the DCS400 probe connector.

USING THE PROBE

To use the probe, follow the operating instructions for the DCS400 found in its user's manual. Before using a DCS400 system with a PE14, read the Safety Instructions section of this manual.

SPECIFICATIONS

Type	Flexible-obedient
Length	3.28 ft. (1m)
Diameter	14mm (0.55 in.)
Camera Light Source	2 high-intensity white LEDs
Camera Field of View	60°
Camera Depth of Field	1 in. (25mm) to infinity
Camera Resolution	640 x 480 pixels (still images); 320 x 240 pixels (video)
Certifications	Water, dust, oil and scratch-resistant to IP67 standard ETL CAT III 1000V, CAT IV 600V (only when used with DCS400 Series system)
Tensile Strength	>12mPa
Breakdown Voltage	715kV/m
Electrical Volume Resistivity	1 x 10^{14} Ω-cm
Operating Temperature	-50° to 257°F (-45° to 125°C) @<80% relative humidity
Weight	9.5 oz. (269g)

OPERATING AND MAINTENANCE TIPS

- Please read the Safety Instructions on p. 4 carefully.
- The probe is flexible to help you operate in hard-to-reach areas. Never insert or bend it by force, and never over-bend any part of the probe. To avoid permanently damaging the delicate wires and optics inside the probe, keep its bending radius above 2 in. (50mm).
- Never use the probe or camera head to modify surroundings or to clear pathways or clogged areas.

- The camera head and its cover are waterproof, but not acid-proof or fire-proof. Do not touch acidic, corrosive or hot materials or they will ruin the camera head's protective plastic. Never place the camera head in contact with corrosive or oily places or high temperature objects.
- When inspecting a vehicle, shut off the engine. Metal and liquid under the hood may be hot. Don't get oil or gas on the camera head.
- Cover the camera-tipped end of the probe with the protective rubber cap when not using it.

WARRANTY INFORMATION

General Tools & Instruments' (General's) PE14 Electrically Insulated Probe for Seeker 400 Wireless Recording Video Inspection Systems is warranted to the original purchaser to be free from defects in material and workmanship for a period of three years. Subject to certain restrictions, General will repair or replace this product if, after examination, the company determines it to be defective in material or workmanship.

This warranty does not apply to damages that General determines to be from an attempted repair by non-authorized personnel or misuse, alterations, normal wear and tear, or accidental damage. The defective unit must be returned to General Tools & Instruments or to a General-authorized service center, freight prepaid and insured.

Acceptance of the exclusive repair and replacement remedies described herein is a condition of the contract for purchase of this product. In no event shall General be liable for any incidental, special, consequential or punitive damages, or for any cost, attorneys' fees, expenses, or losses alleged to be a consequence of any damage due to failure of, or defect in any product including, but not limited to, any claims for loss of profits.

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